IN THE CLAIMS

1. (Currently Amended) An isolated nucleic acid molecule selected from the group consisting of:

a) a nucleic acid molecule comprising a nucleotide sequence which is at least 90% identical to the nucleotide sequence of SEQ ID NO:1, or SEQ ID NO:3, wherein said nucleic acid molecule encodes a polypeptide having at least one activity selected from the group consisting of the ability to glycosylate a target molecule, the ability to bind to a simple sugar and the ability to attach to a membrane;

b) a nucleic acid molecule which encodes a polypeptide comprising an amino acid sequence with at least 90% identity to the amino acid sequence of SEQ ID NO:2, wherein said polypeptide has at least one activity selected from the group consisting of the ability to glycosylate a target molecule, the ability to bind to a simple sugar and the ability to attach to a membrane;

c) a nucleic acid molecule which encodes a fragment of a polypeptide comprising the amino acid sequence of SEQ ID NO:2, wherein the fragment comprises at least 285 contiguous amino acids of SEQ ID NO: 2, wherein said at least 285 contiguous amino acids have at least one activity selected from the group consisting of the ability to glycosylate a target molecule, the ability to bind to a simple sugar and the ability to attach to a membrane; ~~and~~

d) a nucleic acid molecule which encodes a naturally occurring allelic variant of a polypeptide comprising the amino acid sequence of SEQ ID NO:2, wherein the nucleic acid molecule hybridizes to a nucleic acid molecule comprising SEQ ID NO: 1, 3, or a complement thereof, under stringent conditions, wherein said nucleic acid molecule encodes a polypeptide having at least one activity selected from the group consisting of the ability to glycosylate a target molecule, the ability to bind to a simple sugar and the ability to attach to a membrane; and

e) a nucleic acid molecule which encodes the glycosyltransferase domain of 33945 (amino acids 139 to 322 of SEQ ID NO:2), wherein the glycosyltransferase domain has the ability to glycosylate a target molecule.

2. (Original) The isolated nucleic acid molecule of claim 1, which is selected from the group consisting of:

a) a nucleic acid comprising the nucleotide sequence of SEQ ID NO: 1, SEQ ID NO:3; and

b) a nucleic acid molecule which encodes a polypeptide comprising the amino acid sequence of SEQ ID NO:2.

3. (Original) The nucleic acid molecule of claim 1 further comprising vector nucleic acid sequences.

4. (Original) The nucleic acid molecule of claim 1 further comprising nucleic acid sequences encoding a heterologous polypeptide.

5. (Original) A host cell which contains the nucleic acid molecule of claim 1.

6. (Original) The host cell of claim 5 which is a mammalian host cell.

7. (Original) A non-human mammalian host cell containing the nucleic acid molecule of claim 1.

8. (Withdrawn) An isolated polypeptide selected from the group consisting of:

a) a polypeptide which is encoded by a nucleic acid molecule comprising a nucleotide sequence of SEQ ID NO: 1, SEQ ID NO:3, or a complement thereof.

b) a naturally occurring allelic variant of a polypeptide comprising the amino acid sequence of SEQ ID NO:2, wherein the polypeptide is encoded by a nucleic acid molecule which hybridizes to a nucleic acid molecule comprising SEQ ID NO: 1, SEQ ID NO:3, or a complement thereof under stringent conditions; and

c) a fragment of a polypeptide comprising the amino acid sequence of SEQ ID NO:2, wherein the fragment comprises at least 285 contiguous amino acids of SEQ ID NO:2.

9. (Withdrawn) The isolated polypeptide of claim 8 comprising the amino acid sequence of SEQ ID NO:2.

10. (Withdrawn) The polypeptide of claim 8 further comprising heterologous amino acid sequences.

11. (Withdrawn) An antibody which selectively binds to a polypeptide of claim 8.

12. (Currently Amended) A method for producing a polypeptide selected from the group consisting of:

a) a polypeptide comprising an amino acid sequence with at least 90% identity to the amino acid sequence of SEQ ID NO:2, wherein said polypeptide has at least one activity selected from the group consisting of the ability to glycosylate a target molecule, the ability to bind to a simple sugar and the ability to attach to a membrane;

b) a polypeptide comprising a fragment of the amino acid sequence of SEQ ID NO:2, wherein the fragment comprises at least 285 contiguous amino acids of SEQ ID NO:2, wherein said at least 285 contiguous amino acids have at least one activity selected from the group consisting of the ability to glycosylate a target molecule, the ability to bind to a simple sugar and the ability to attach to a membrane; ~~and~~

c) a polypeptide comprising a naturally occurring allelic variant of a polypeptide comprising the amino acid sequence of SEQ ID NO:2, wherein the polypeptide is encoded by a nucleic acid molecule which hybridizes to a nucleic acid molecule comprising SEQ ID NO:1, SEQ ID NO:3, or a complement thereof under stringent conditions, wherein said polypeptide has at least one activity selected from the group consisting of the ability to glycosylate a target molecule, the ability to bind to a simple sugar and the ability to attach to a membrane; and

d) a polypeptide comprising the glycosyltransferase domain of 33945 (amino acids 139 to 322 of SEQ ID NO:2), wherein the glycosyltransferase domain has the ability to glycosylate a target molecule;

comprising culturing the host cell of claim 5 under conditions in which the nucleic acid molecule is expressed.

13. (Withdrawn) A method for detecting the presence of a polypeptide of claim 8 in a sample, comprising:

a) contacting the sample with a compound which selectively binds to a polypeptide of claim 8; and

b) determining whether the compound binds to the polypeptide in the sample.

14. (Withdrawn) The method of claim 13, wherein the compound which binds to the polypeptide is an antibody.

15. (Withdrawn) A kit comprising a compound which selectively binds to a polypeptide of claim 8 and instructions for use.

16. (Withdrawn) A method for detecting the presence of a nucleic acid molecule of claim 1 in a sample, comprising the steps of:

a) contacting the sample with a nucleic acid probe or primer which selectively hybridizes to the nucleic acid molecule; and

b) determining whether the nucleic acid probe or primer binds to a nucleic acid molecule in the sample.

17. (Withdrawn) The method of claim 16, wherein the sample comprises mRNA molecules and is contacted with a nucleic acid probe.

18. (Original) A kit comprising a compound which selectively hybridizes to a nucleic acid molecule of claim 1 and instructions for use.

19. (Withdrawn) A method for identifying a compound which binds to a polypeptide of claim 8 comprising the steps of:

a) contacting a polypeptide, or a cell expressing a polypeptide of claim 8 with a test compound; and

b) determining whether the polypeptide binds to the test compound.

20. (Withdrawn) The method of claim 19, wherein the binding of the test compound to the polypeptide is detected by a method selected from the group consisting of:

a) detection of binding by direct detecting of test compound/polypeptide binding;

b) detection of binding using a competition binding assay;

c) detection of binding using an assay for 33945-mediated signal transduction.

21. (Withdrawn) A method for modulating the activity of a polypeptide of claim 8 comprising contacting a polypeptide or a cell expressing a polypeptide of claim 8 with a compound which binds to the polypeptide in a sufficient concentration to modulate the activity of the polypeptide.

22. (Withdrawn) A method for identifying a compound which modulates the activity of a polypeptide of claim 8, comprising:

a) contacting a polypeptide of claim 8 with a test compound; and

b) determining the effect of the test compound on the activity of the polypeptide to thereby identify a compound which modulates the activity of the polypeptide.

23. (Withdrawn) A composition for treating atherosclerosis or endothelial cell disorders in a subject, comprising a compound which modulates the expression or activity of a 33945 nucleic acid molecule or polypeptide.

24. (Withdrawn) A method for treating atherosclerosis or endothelial cell disorders in a subject, comprising administering a compound which modulates the expression or activity of a 33945 nucleic acid molecule or polypeptide.

25. (New) A host cell which expresses the nucleic acid molecule of claim 1.

26. (New) The host cell of claim 25 which is a mammalian host cell.

27. (New) An isolated nucleic acid molecule, consisting of a nucleic acid sequence selected from the group consisting of:

a) SEQ ID NO: 1;

b) SEQ ID NO:3; and

c) a nucleic acid molecule which encodes a polypeptide having an amino acid sequence consisting of SEQ ID NO:2.